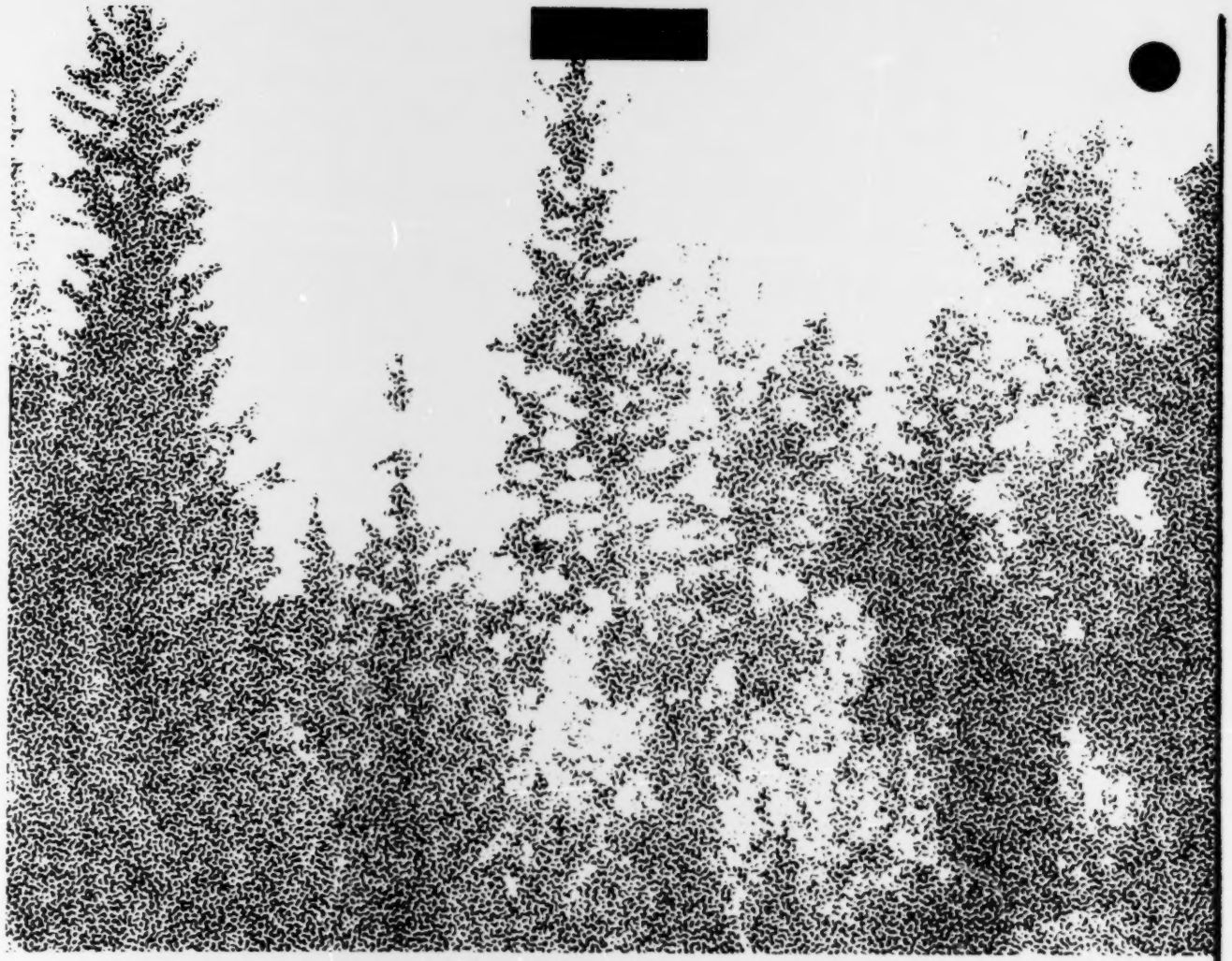
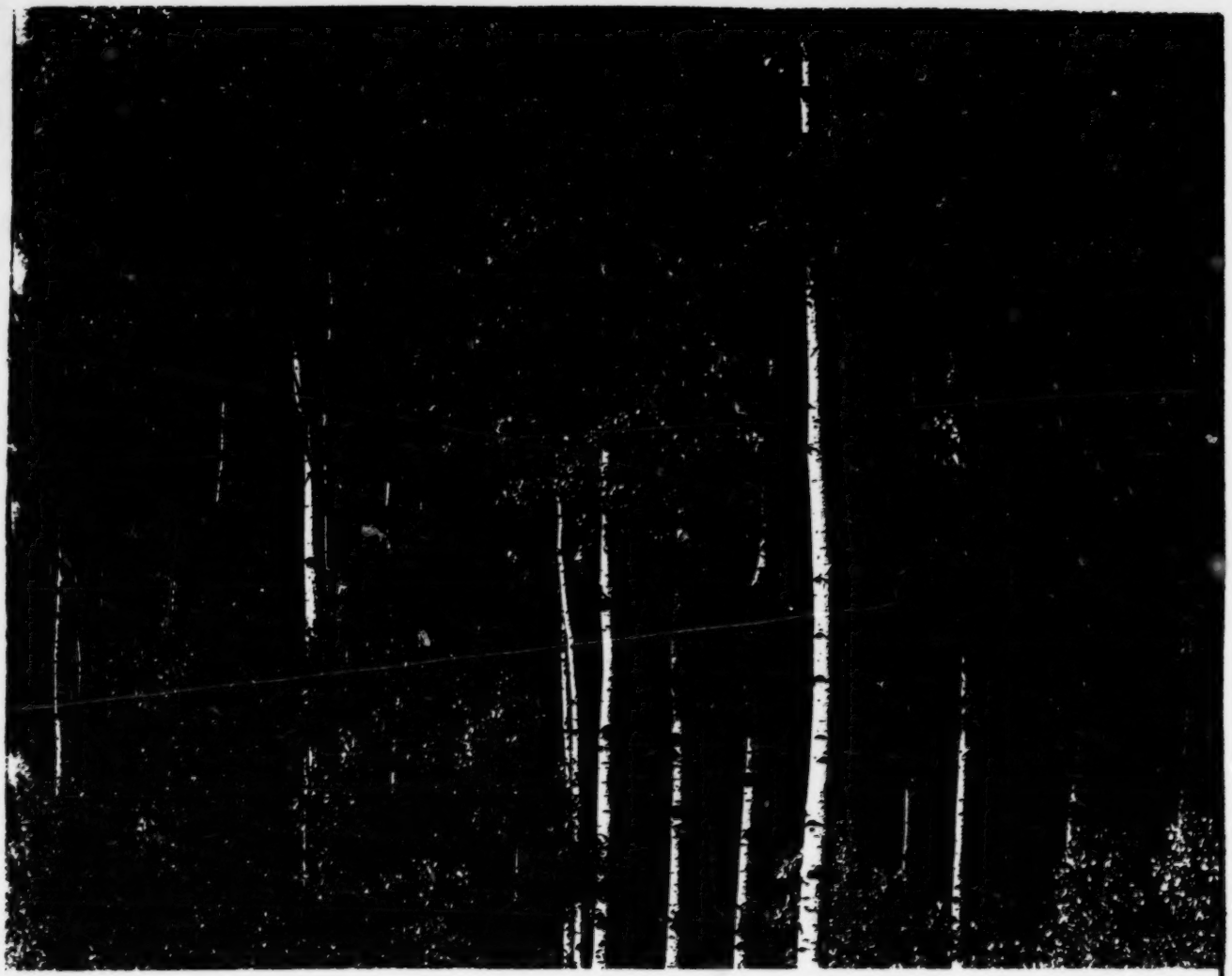


HIGH PRAIRIE

TIMBER DEVELOPMENT AREA

Alberta



HIGH PRAIRIE

TIMBER DEVELOPMENT AREA

THE FOREST RESOURCE

Alberta's reserves constitute the largest supply of coniferous and deciduous timber available in North America. The High Prairie Timber Development Area (TDA) is one of Alberta's best aspen (poplar) development opportunities. The development of areas similar to the High Prairie TDA has made Alberta a dynamic force in the forest industry in Canada, and around the world. Alberta's primary hardwood species, trembling aspen (Populus tremuloides), predominates in the High Prairie area, and is suitable for the production of waferboard, oriented strandboard, particleboard and other panel products.

High Prairie Timber Development Area Resource Overview

Deciduous Annual Allowable Cut	571,100 cubic meters (133,066,000 board feet)
Gross Area	824,014 hectares (2,035,315 acres)

QUALITY OF RESOURCE

The High Prairie Timber Development Area is located in central Alberta, approximately 364 kilometres (226 miles) north of Edmonton and 199 kilometers (124 miles) east of Grande Prairie. The total area of the High Prairie TDA is 824,014 hectares (2,035,315 acres) and can be broken down by productivity class as follows:

Productive	572,571 hectares (1,414,251 acres)
Potentially Productive	24,724 hectares (61,068 acres)
Non-productive	226,719 hectares (559,996 acres)

The forest cover in the TDA is primarily hardwood, with trembling aspen predominating. The trembling aspen volume in the area has been estimated at approximately 21 million cubic meters (4.9 billion board feet). Growth rates in aspen range up to 2.41 cubic meters/hectare/year (228 board feet/acre/year) at 90 years of age. In mature and overmature deciduous stands, likely to be harvested over the next 20 years, the approximate average tree size is 23.0 meters (75.5 feet) in height, and 30.1 centimeters (11.9 inches) in diameter at breast height. The average volume per tree is 0.67 cubic meters (156 board feet - "Alberta log rule").

For deciduous stands at or near maturity, advanced decay percentages range from 3.8 to 9.0 percent, increasing with stand height. The amount of decay present is highly variable and is influenced by a number of factors including site quality, tree growth, genetic constitution, stand density, and age. For aspen stands a high decay and subsequent mortality usually occurs after 100 years of age, with most stands having little or no volume at 180 years.

CULL PERCENTAGE (FOR PULP UTILIZATION)

- for deciduous stands likely to be harvested over the next 20 years

HEIGHT		
METERS	FEET	CULL (as a percent of gross volume*)
12 - 17	40 - 59	3.8
18 - 23	60 - 79	4.3
24 - 29	80 - 99	9.0

* 15 centimeters stump diameter and greater.

WOOD SUPPLY

DECIDUOUS WOOD SUPPLY

Seventy percent of this wood supply is available in pure aspen stands. The remainder is found in aspen-conifer mixedwood stands. This is readily available through integrated harvesting of the mixed stands in conjunction with coniferous timber operators in the area. The timber operators are:

Quota Holder	Address
Jean Noel Audy	Nampa, Alberta T0H 2R0
Gordon Buchanan	Box 38 High Prairie, Alberta T0G 1E0
Bissell Bros. Lumber Ltd.	Box 60 Enilda, Alberta T0G 0W0
Zeidler Forest Industries Ltd. and Margaret Zeidler	Box 4370 Edmonton, Alberta T6E 1N8

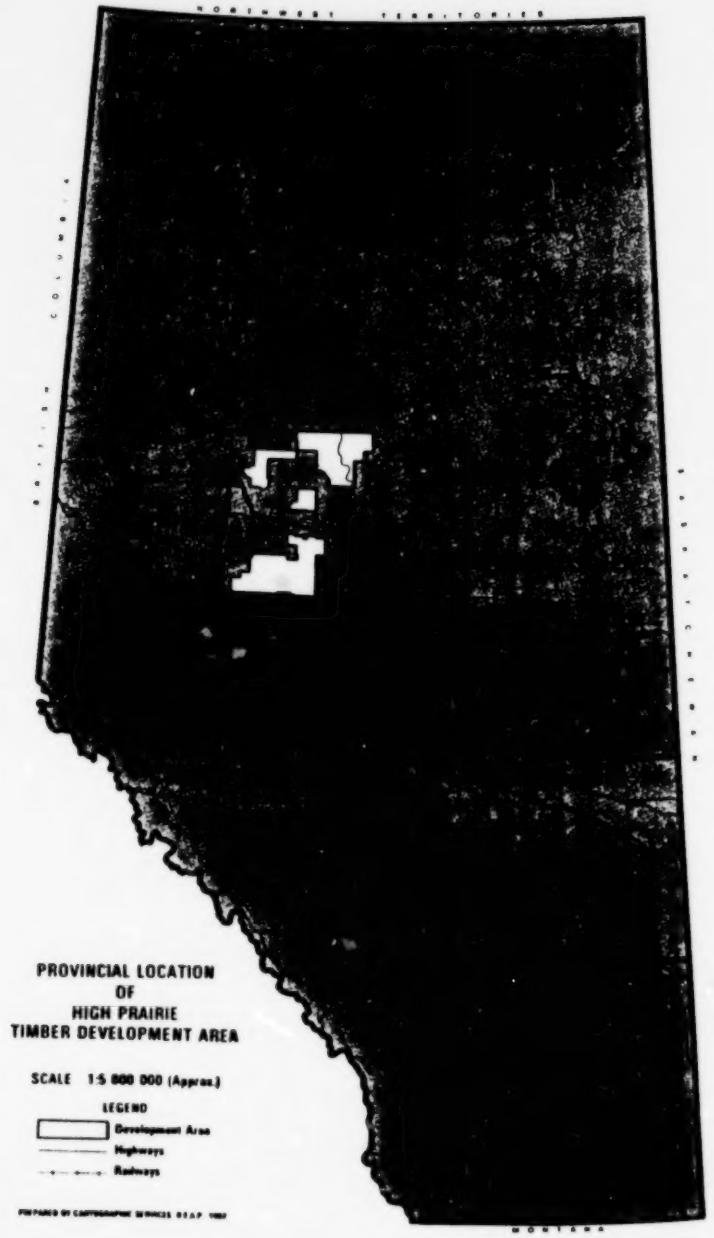
Annual Allowable Cut	Committed	Uncommitted
571,100 cubic meters (133,066,000 board feet)	0 cubic meters	571,100 cubic meters (133,066,000 board feet)

In addition to the supply of roundwood in the Timber Development Area there is a large supply of aspen on the private lands and within the Metis Settlements adjacent to High Prairie. This resource is significant both in terms of its extent and proximity to High Prairie. The developer of the TDA would be able to obtain this additional wood supply through purchase agreements with the Metis colonies and private land owners.

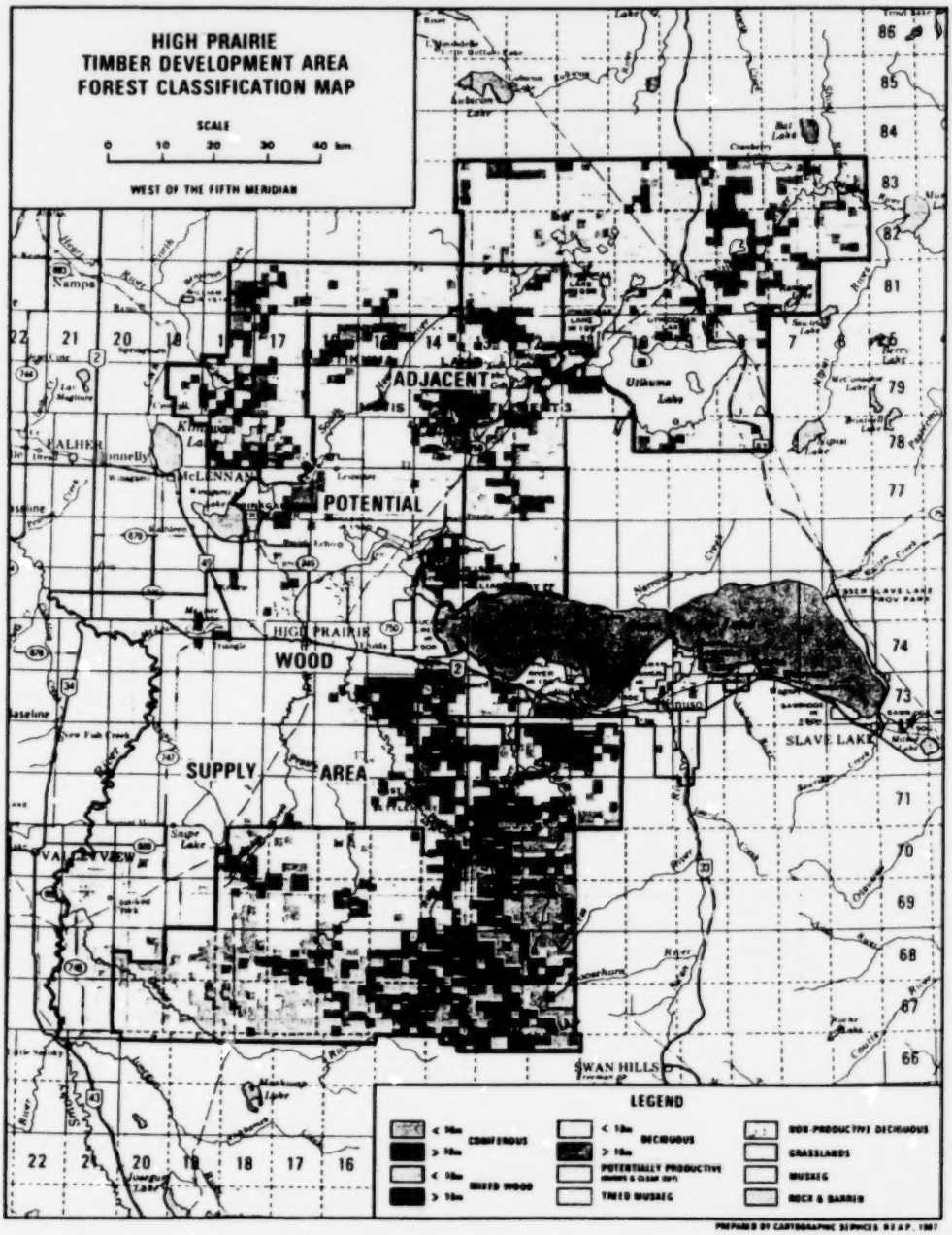
RESEARCH & DEVELOPMENT

A recent study by Morrison-Knudsen concluded that it is both technically and economically feasible to produce oriented strandboard (OSB) from sawmill residues namely slabs, edgings and pulp chips. The process involves maxi-chipping residues, followed by ring flaking and the use of Morrison-Knudsen's patented electrostatic orientator in the forming line. Incorporation of this type of system would eliminate the need for a full fledged green log yard and ancilliary equipment thus reducing capital costs of a new plant by at least 10%.

TDA LOCATION



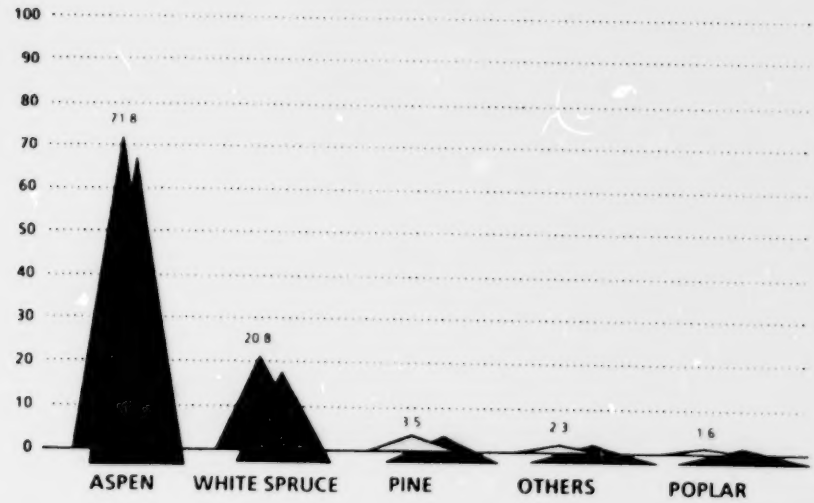
CLASSIFICATION MAP



DECIDUOUS LAND BASE

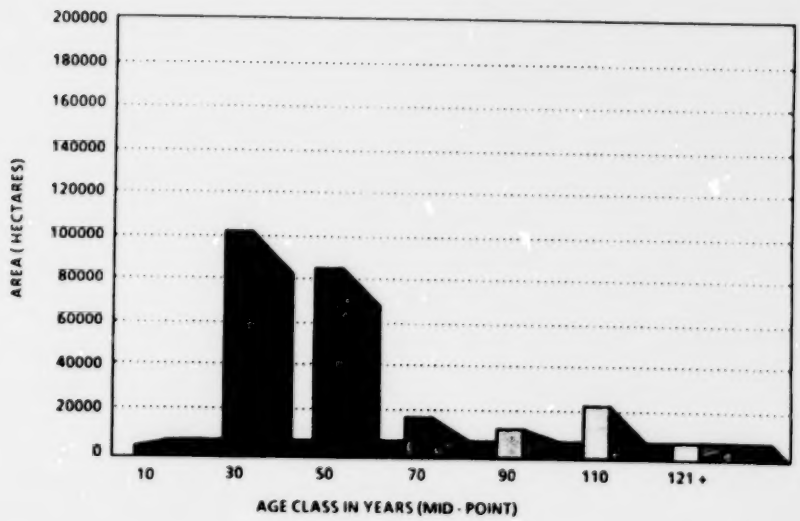
PERCENT VOLUME BY SPECIES

HIGH PRAIRIE TDA DECIDUOUS LAND BASE



AREA BY AGE CLASS

HIGH PRAIRIE TDA DECIDUOUS LAND BASE



STAND/STOCK TABLE
MATURE DECIDUOUS LAND BASE

Utilization Standards: Minimum Stump Diameter - 15 cm (6 inch)
Minimum Top Diameter (inside bark) - 10 cm (4 inch)

DBH (CM)	DBH (INCH)	NS/HA	NS/ACRE	GROSS VOLUME (CU M/HA)	GROSS VOLUME (FBM/AC)
12	4.7	36	14	NIL	NIL
14	5.5	35	14	2	189
16	6.3	37	15	5	471
18	7.1	27	11	4	377
20	7.9	25	10	5	471
22	8.7	23	9	6	566
24	9.4	23	7	8	754
26	10.2	24	10	12	1,132
28	11.0	18	7	10	943
30	11.8	19	8	13	1,226
32	12.6	21	9	17	1,603
34	13.4	18	7	16	1,509
36	14.2	15	6	15	1,414
38	15.0	11	4	12	1,132
40	15.7	11	4	14	1,320
42	16.5	7	3	10	943
44	17.3	6	2	10	943
46	18.1	5	2	8	754
48	18.9	3	1	7	660
50	19.7	2	1	5	471
52	20.5	2	1	5	471
54	21.3	2	1	3	283
56	22.0	1	0	3	283
58	23.5	1	0	2	189

AVERAGE DBH	30.1 centimeters
AVERAGE HEIGHT	23.0 meters
GROSS VOLUME/TREE	0.674 cubic meters
CULL %	5.01

CM - CENTIMETERS
DBH - DIAMETER BREAST HEIGHT
NS - NUMBER OF STEMS
HA - HECTARE
CU M/HA - CUBIC METERS/HECTARE
FBM/AC - BOARD FEET/ACRE

PROVINCIAL FULLY STOCKED YIELD TABLES
HARDWOODS MEDIUM SITE

Utilization Standards: Minimum Stump Diameter - 15 cm (6 inch)
Minimum Top Diameter (inside bark) - 10 cm (4 inch)

TOTAL AGE (YR)	TOP HEIGHT (M)	TOP HEIGHT (FT)	GROSS VOLUME (CU M/HA)	GROSS VOLUME (MFBM/AC)	GROSS MAI (CU M/HA/YR)	GROSS VOLUME (FBM/AC/YR)	NO. OF TREES (PER HA)	NO. OF TREES (PER AC)
10	4.2	13.7	0.0	0.0	0.0	0.0	0	0
20	9.0	29.4	0.0	0.0	0.0	0.0	0	0
30	12.7	41.5	0.0	0.0	0.0	0.0	0	0
40	15.5	50.8	7.8	0.7	0.19	18.3	138	56
50	17.7	58.1	70.0	6.6	1.40	131.9	544	220
60	19.5	63.8	119.3	11.3	1.99	187.5	617	250
70	20.9	68.4	158.8	15.0	2.27	214.0	615	249
80	22.0	72.1	190.9	18.0	2.39	225.0	592	240
90	22.9	75.3	217.1	20.5	2.41	227.5	565	229
100	23.7	77.9	238.9	22.5	2.39	225.3	540	219

CM - CENTIMETERS
YR - YEARS
M - METERS
FT - FEET
CU M/HA - CUBIC METERS/HECTARE
CU M/HA/YR - CUBIC METERS/HECTARE/YEAR
MAI - MEAN ANNUAL INCREMENT
FBM/AC/YR - BOARD FEET/ACRE/YEAR
HA - HECTARE
AC - ACRE

COMMUNITY PROFILE - HIGH PRAIRIE

The town of High Prairie is central to the three component areas of the High Prairie Timber Development Area. High Prairie has a positive attitude towards economic development and is in a position to provide a full array of municipal services. The economic base of High Prairie is derived from timber, agriculture, and natural gas. A profile of the community is given below:

POPULATION		2,580
LABOUR FORCE	- male	695
	- female	530
	- a number of independent logging contractors, with considerable woods operation experience are located in High Prairie.	
DISTANCE FROM MAJOR CENTRES		364 kilometers (226 miles) northwest of Edmonton
CONNECTING HIGHWAYS		#2 - high standard, paved #749 - high standard, paved
RAILWAY		Canadian National Railway
AIRPORT - longest runway		1,067 meters (3,500 feet) paved surface, night operation
WATER - major river - (Little Smokey)		located approximately 27 kilometers (17 miles) west of High Prairie
- Flow rate		8 cubic meters/second (2,928 cubic feet/second) average from May to October
ELEVATION		594 meters (1,949 feet)
TEMPERATURE - seasonal averages		winter -18.6° centigrade (-1.4°F) summer +15.5° centigrade (59.8°F)
ANNUAL PRECIPITATION - rain		316.6 millimeters (12.46 inches)
- snow		149.1 centimeters (58.70 inches)
- total		468.1 millimeters (18.42 inches)
FROST FREE DAYS		95
ELECTRICAL POWER - industrial rates		Alberta Power Ltd. $7.05 - $13.85 per month per kilowatt dependent on demand plus $0.012 - $0.017 per kilowatt energy charge. Rebates are available which may amount to as much as a 35% reduction in these rates.
NATURAL GAS - industrial rates		Town of High Prairie. $25 per month plus $2.41 per thousand cubic feet. The rates indicated are approximate guidelines. Each application is dealt with on an individual basis as rates vary with consumption and seasonal demand requirements.
MILL RATE - industrial		$177.57/$1000 assessed tax value
- residential		$141.17/$1000 assessed tax value

PER CAPITA DEBT	$1,282.34 (1982)
MEDICAL	1 Hospital (76 beds) 6 Doctors 1 Dentist
EDUCATION	2 Daycare/Nursery 2 Elementary (Grades 1 - 6) 2 Junior High (Grades 7 - 9) 1 High School (Grades 10 - 12) Alberta Vocational School, Grouard
RECREATION	Swimming, Tennis, Skating, Curling, Hunting, Baseball, Fishing, Golf, Boating

COMMUNITY PROFILE - McLENNAN

The town of McLennan is strategically located near the three component areas of the High Prairie Timber Development Area. McLennan is a progressive community and has a positive attitude to economic development.

Agriculture, natural gas and the forest industry now provide the diversity of resources which contribute to the stable economic base. A profile of the community is given below:

POPULATION	1,176
LABOUR FORCE - male	250
- female	230
- a number of independent logging contractors, with considerable woods operation experience are located in McLennan.	
DISTANCE FROM MAJOR CENTRES	76 kilometers (47 miles) southeast of Peace River
	187 kilometers (116 miles) northeast of Grande Prairie
	438 kilometers (272 miles) northwest of Edmonton
CONNECTING HIGHWAYS	#49 - high standard, paved #2 - high standard, paved
RAILWAY	Canadian National Railway
AIRPORT - longest runway	912 meters (3,000 feet) paved surface, night operation
WATER	McLennan is located at the southern end of Kimiwan Lake.
ELEVATION	623 meters (2,044 feet)
TEMPERATURE - seasonal averages	winter -18.9° centigrade (-2.0°F) summer +15.9° centigrade (60.6°F)

[redacted]

ANNUAL PRECIPITATION - rain	308.3 millimeters (12.1 inches)
- snow	159.6 centimeters (62.8 inches)
- total	468.7 millimeters (18.5 inches)
FROST FREE DAYS	100
ELECTRICAL POWER - industrial rates	Alberta Power Ltd. $7.05 - $13.85 per month per kilowatt dependent on demand plus $0.012 - $0.017 per kilowatt energy charge. Rebates are available which may amount to as much as a 35% reduction in these rates.
NATURAL GAS - industrial rates	Northwestern Utilities Ltd. $2.150 per gigajoule per month with a minimum monthly charge of $122.25 per month. The rates indicated are approximate guidelines. Each application is dealt with on an individual basis as rates vary with consumption and seasonal demand requirements.
MILL RATE - industrial	$35.40/$1000 assessed tax value
- residential	$30.61/$1000 assessed tax value
PER CAPITA DEBT	$747.00 (1983)
MEDICAL	1 Hospital (63 beds) 4 Doctors Dentists (mobile unit)
EDUCATION	1 Kindergarten (pre-school) 2 Elementary (Grades 1 - 6) 1 Junior High (Grades 7 - 9) 1 High School (bussed to Donnelly 12 kilometers west) Alberta Vocational Centre
RECREATION	Library, Baseball, Boating, Hunting, Tennis, Golf Skating, Fishing

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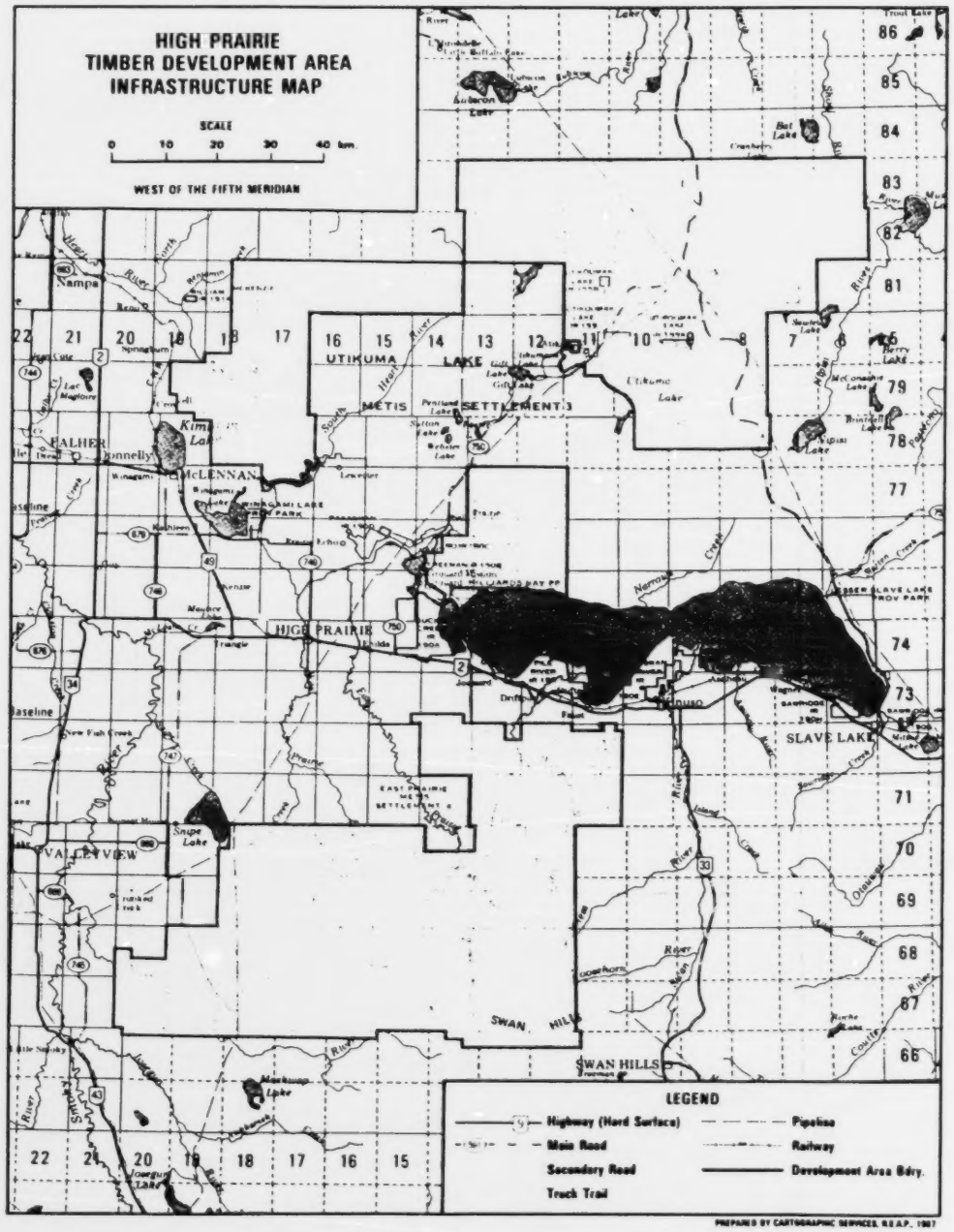
INFRASTRUCTURE MAP



CONTACTS

To assist prospective applicants in preparing their proposal for the High Prairie Timber Development Area, a list of contact persons with Alberta Forestry, Lands and Wildlife is included.

Department	Contact Person
Alberta Forestry, Lands and Wildlife 9915 - 108 Street Edmonton, Alberta T5K 2C9	Mr. F.W. McDougall Deputy Minister Forestry, Lands and Wildlife (403) 427-3552 Mr. C.B. Smith Assistant Deputy Minister Alberta Forest Service (403) 427-3542

Also, in order to meet the growing demands of the forest industry the Forest Industry Development Division was organized within the Department of Forestry, Lands and Wildlife. The role of this new division is to assist new and existing forest companies and private investors to upgrade and utilize Alberta's vast uncommitted forest resources for a variety of forest products. The division is made up of people that can offer expertise in all aspects of forestry.

Mr. J.A. Brennan
Executive Officer
Forest Industry Development Division
930, 9942 - 108 Street
Edmonton, Alberta
T5K 2J5
(403) 422-7011